

School Zone Speed Camera Report to the County Council



Howard County Police Department

Gary L. Gardner, Chief of Police

March 2016

Executive Summary



The Howard County Police Department has been successfully operating a speed camera program in school zones since enabling legislation was passed in Howard County during May, 2011. Our program was designed to provide police with another tool to address residents' number-one complaint: speeding on residential and school zone roadways. You will find in this report that our program has done just that by providing additional support to our traditional speed enforcement efforts.

Our research shows that the program reduced speeds on sixty-nine percent (69%) of our school zone roadways in 2015 when compared with studies completed prior to the start of our program. It has also reduced the number of collisions occurring on those roadways by twenty-four percent (24%). The program is having the effect we've worked for from the beginning. Drivers are changing their behaviors and roads around schools are getting safer.

The program resulted in 27,069 speed citations being issued to vehicle owners in 2015, an increase of eight percent (8%) when compared to 2014. This increase is attributed to our continued use of the PCUs (Portable Camera Units) and a slight increase in areas where the PCU is being used. To date, since its launch in late 2011, the program has funded itself and in Fiscal Year 2015 collected \$251,577.00 in funds over the costs of running the program. That money is required by law to be earmarked for school, traffic and pedestrian safety projects. During FY 2015, \$134,992.00 was allocated to Traffic Safety Capital Projects.

The following report is an analysis that addresses all the reporting requirements of the county code. I am confident that you will agree that the speed camera program in Howard County continues to be effective, efficient, fair, and a true benefit to safety in our school zones.

Gary L. Gardner
Chief of Police

Program Overview:

Speed camera legislation was introduced before the Howard County Council in the spring of 2011. The legislation authorized the Department of Police to use speed monitoring systems in school zones. The overall goal of the speed camera program was to change behavior and encourage drivers to slow down.

School zones within Howard County are established in accordance with section 21-803.1 of the Transportation Article of the Annotated Code of Maryland which defines a school zone as any roadway segment within up to a half-mile radius of an eligible school. School zones on a county road are determined by the Department of Public Works to be that part of the road that has a reasonable nexus or proximity to a school or school walking route.

In May 2011, the County Council passed Council Bill 13-2011, authorizing the use of speed cameras in Howard County. A 30-day warning period began on October 15, 2011 and the program began issuing civil citations on November 16, 2011.

The Howard County program began with two manned mobile systems, which do not require roadway improvements or roadway construction, resulting in no inconvenience to the public. Only members of the police department who are certified to operate the camera system and equipment are permitted to staff the vans.

At the start of the 2013-2014 school year we added two additional speed detection instruments. These instruments, called portable camera units (PCUs) are housed in cabinets that are bolted to concrete pads. The PCUs are being used in school zones where the road configurations make it challenging to safely use the speed camera vans. These portable units allow the department to address speeding issues in school zones without impeding traffic or causing unnecessary distractions to drivers where space is limited and it would be unsafe to do so.

School zone speed enforcement takes place Monday through Friday from 6 a.m.-8 p.m., in accordance with Maryland State Law, Transportation Article 21-809. During the school system's winter and spring breaks, we operated one van and both PCUs, concentrating our enforcement in school zones where activities were taking place. During the summer break, we concentrated our efforts at schools that hosted summer school and recreational programs.

Every designated school zone is posted with advanced warning notification consisting of a "School Zone" sign, a sign displaying the speed limit, and a "Photo Enforcement" sign. In addition, all roadways where the speed camera vans will be assigned are listed on the HCPD website at least a week in advance.



Our program is designed as an additional tool to supplement the efforts of patrol officers to slow down speeding drivers. The efforts of our staff assigned specifically to the speed camera program in 2015 have resulted in two hundred and forty-five (245) days of enforcement, totaling over 10,000 hours and the issuance of 27,069 civil speed camera citations. During the same time period, our patrol officers, who are tasked with a multitude of responsibilities, such as responding to emergency calls, writing reports, and handling investigations; spent 4,298 hours conducting RADAR and LASER speed enforcement and issued 4,210 citations in school zones and residential areas. It is clear that the automated speed camera program allows us to focus on speeding in school zones in a way we simply otherwise could not.

These enforcement efforts have resulted in a lowering of the 85th percentile speed on sixty-nine percent (69%) of the school zone roadways since the program began in October 2011.

A more complete look at our enforcement efforts is provided in Section 1 and in **Appendix A**.

The Howard County Department of Police uses the process listed below to promote transparency and public confidence in our enforcement efforts.

STEP ONE: One of our two mobile vans, with equipment leased at a monthly rate from Xerox, is dispatched to a school location to identify speeding vehicles. The Howard County Program Administrator selects the enforcement locations not the vendor. Because the units are mobile, there are technicians that operate each van. Those technicians are Howard County Police employees. The detection system is checked hourly for accuracy. The technicians capture data, and then return to a county office to download that data.

Beginning in August 2013, we began utilizing Portable Camera Units (PCUs). The process of running that instrument is similar to that of the van only that it is secured to the ground in a cabinet. Our technicians operate these systems in the same manner as the van, monitoring the violations as they occur and conducting hourly tests via a secured wireless connection.

STEP TWO: The downloaded data is sent to the vendor, which formats it and returns it to the county in a form that allows our employees to verify whether the data and image meet our criteria for determining if a violation occurred. This is the first step where the vendor touches the data. But note that Xerox is compensated at this stage based on the amount of data that Howard County employees send to them. They have no control over the number they receive, or the locations where the violations come from, and thus cannot control their income.

STEP THREE: The formatted data is reviewed by a Howard County Police civilian employee, different from the technicians in the van, to verify that violations occurred.

STEP FOUR: Each alleged violation is then reviewed by a sworn Howard County Police supervisor.

STEP FIVE: The vendor is told to print the violations approved by the supervisor. This is the second step where Xerox is involved.

STEP SIX: A Howard County Police Speed Camera Program employee then verifies that the printed image is of sufficient clarity to justify a violation notice. Only after this final review is a citation mailed to the vehicle owner.

Of those six steps, just two involve the vendor. In every sense, the Howard County Police Department operates the program, not Xerox. Vehicle owners with questions or concerns speak directly with a Howard County employee. Complaints or concerns about the validity of a citation are directed to our "Ombudsman". This person, a Police Supervisor, is appointed by the Chief of Police and is not connected or involved in program management or the issuance of citations. The Ombudsman reviews and investigates the complaint and has the authority to void the citation.

Additionally, the Howard County Department of Police conducts our own independent tests of our systems each month to ensure their reliability. These tests affirm that the Vitronic PoliScan is an accurate and reliable Speed Detection Instrument.

Contents

The following report is broken down into eight sections as required in Howard County Code *Title 21 Traffic Control and Transportation Subtitle 6 Speed Camera Monitoring Systems*.

- Section 1.** Enforcement Activity to Include Location and Frequency of the Placement of Speed Monitoring Systems
- Section 2.** Citation Information to include Violations Photographed, Rejected, Issued, Appealed and Final Adjudication
- Section 3.** Collision Information, a Comparison of Collisions Before and After Enforcement
- Section 4.** Updated Speed Surveys
- Section 5.** Financial Information to include Program Costs, Vendors Fees, Total Fines Collected, Excess Fines, Use of Excess Fines
- Section 6.** List of School Zones highlighting any changes
- Section 7.** Major Problems / Irregularities
- Section 8.** Program Recommendations

Section 1. Enforcement Activity to Include Locations/Frequency of Placement

Howard County currently has seventy-six (76) county schools and ten (10) private schools with a total of one hundred and seventy-nine (179) possible enforcement locations. We conduct enforcement in one hundred and thirty-five (135) of these school zone locations. The entire 2015 enforcement listing, to include the frequency on each roadway, is available in **Appendix A**. Roads receiving speed camera enforcement are based on the locations with the most significant speeding problems as determined by surveys taken of each roadway. Residents may request additional attention be given to roads where they observe speeding problems.

The locations where the fastest speeds occurred during 2015 are listed below:

87 MPH in a 35 MPH Zone	Whiskey Bottom Road	Phillips School
90 MPH in a 40 MPH Zone	Ten Oaks Road	St. Louis School
71 MPH in a 30 MPH Zone	Vollmerhausen Road	Bethel Christian Academy
76 MPH in a 35 MPH Zone	Ten Oaks Road	Dayton Oaks Elementary School
75 MPH in a 35 MPH Zone	Tamar Drive	Long Reach High School
75 MPH in a 35 MPH Zone	Old Montgomery Road	Maryland School for the Deaf

Citations were issued in all of these instances and they have been paid.

Section 2. Citation Information to Include Violations Photographed, Rejected, Issued

In 2015, there were a possible 29,390 violations recorded by our detection equipment, but only 27,069 citations were mailed. The difference in the number of possible violations recorded and the number of those violations mailed is due to our multi-level review process and the rejection of possible violations based upon our strict quality-control measures. The number of violations rejected and the reason for each is documented in **Appendix A**.

Possible Violations	29,390
Violations Rejected	1,721 (1 violation in process)
Violations Post Print Rejected	599
Violations Mailed	27,069

The Howard County Department of Police conducts two reviews of potential citations prior to them being sent to the vendor for printing. The 1st review is called Pre- Approval and is completed by a Department of Police civilian employee. The second review is called Approval and, by law, must be completed by a sworn officer.

During the review process we rejected 1,721 possible violations for reasons including:

- Car Obstructed – View of vehicle is obstructed by another vehicle
- Clarity of Plate – Clarity of plate is not satisfactory for issuance
- Dark Environment – Environment is too dark to distinguish vehicle
- Plate Obstructed- Part or all plate characters obstructed
- Vehicle Match Failure – MVA return does not match vehicle type in photo
- DMV No Hit – MVA information return did not occur within the 14 or 30 day time frame
- Stationary Object Visible – Fixed Object is not visible in both photographs
- Plate Damage – Damage or degraded characters make them illegible
- No Plate – Registration Plate not visible on violation photos

Additional citations are rejected during our Post Print Review and Rejection process. During that process, a police employee reviews each citation to ensure that it meets our strict criteria for mailing, even if the electronic image appeared acceptable.

During the Post Print Review process, we rejected 599 printed citations for reasons including:

- unclear registration plate
- lack of a fixed object in the photo
- photos were too dark
- photos were generally unclear
- registration plate was obstructed

Even though these 599 violations were acceptable when viewed on the computer due to the ability to enlarge the photographs, we rejected them upon reviewing the final paper product.

Emergency vehicle operators are also issued citations if they were detected to be exceeding the threshold speed and were not on emergency calls. In total, two-hundred and thirty-five (235) emergency vehicles (fire and police, including those from out-of-county) were detected speeding. Of those, one hundred and seventy-three (173) were on emergency calls; the remaining sixty-two (62) cases resulted in citations being issued; a 7% decrease from 2014. Payments were made by the responsible party.

Seventy-three (73) non-emergency government vehicles (Howard, Federal and other jurisdictions) were detected exceeding the speed limit resulting in citations being issued. The fines associated with these citations were paid by the individual driver from personal funds. School buses, which are owned by contractors, received fifteen (15) speed camera citations during this reporting period; a 42% decrease from 2014. These citations have been paid by the bus contractor or the bus operator.

Of the 27,069 vehicle owners who received citations in 2015, thirty-two (32) chose to appear in court.

Cases Adjudicated in Court 2015

Month	Cases Scheduled	Guilty	Not Guilty	% Guilty	% Not Guilty
<i>January 2015</i>	2	2	0	100%	0%
<i>February 2015</i>	1	1	0	100%	0%
<i>March 2015</i>	2	2	0	100%	0%
<i>April 2015</i>	1	1	0	100%	0%
<i>May 2015</i>	1	1	0	100%	0%
<i>June 2015</i>	3	3	0	100%	0%
<i>July 2015</i>	0	0	0	0%	0%
<i>August 2015</i>	7	6	1	86%	14%
<i>September 2015</i>	3	3	0	100%	0%
<i>October 2015</i>	8	8	0	100%	0%
<i>November 2015</i>	2	2	0	100%	0%
<i>December 2015</i>	2	2	0	100%	0%
2015 Totals	32	31	1	96.875%	3.125%

**Judges have used some judicial discretion in hearing these cases and made one finding of “not guilty” out of the 27,069 citations issued. This finding did not involve questions or concerns about the validity of the equipment or the program.*

Section 3. Collision Information / Comparison

During our initial study (2009-2010) and consideration of Speed Cameras, we conducted a 5-year review of collisions in school zones. We found that overall; we averaged one hundred and sixty-two (162) collisions per year, including fourteen (14) personal injury and one hundred and forty-eight (148) property damage. Our recent review of the 2015 school zone collisions shows a total of one hundred and twenty-three (123) collisions, a twenty-four percent (24%) reduction from our initial 5-year study. Of those one hundred and twenty-three (123) collisions, thirteen (13) were personal injury and one hundred and ten (110) were property damage.

Section 4. Updated Speed Surveys

Our initial School Zone Speed Studies were conducted in 2009-2010. School Zone Speed Studies for the current school year have been conducted in the areas where enforcement has taken place. These studies show that our enforcement efforts have resulted in a lowering of the 85th percentile speed on sixty-nine percent (69%) of the studied school zone roadway enforcement locations by as much as 14 MPH.

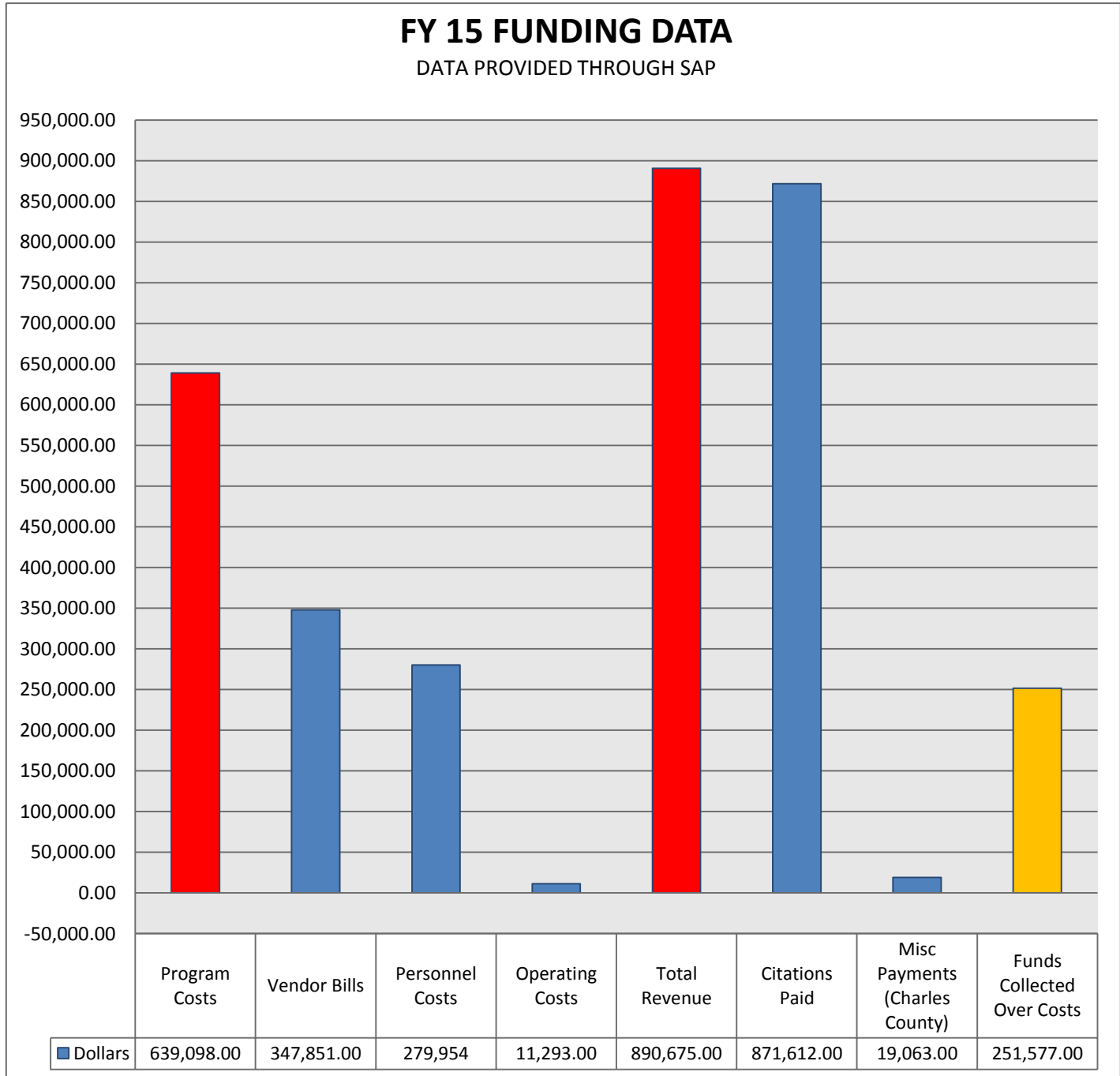
The results of the Speed Surveys are located in **Appendix B** and contain both the pre- and post-enforcement study information.

Both the pre- and post-enforcement surveys were conducted in school zones for a 48-hour period when school was in session for both days.

Section 5. Financial Information to Include Program Costs

During Fiscal Year 2015, the Speed Camera Program cost a total of \$639,098.00 to operate. Those costs included \$347,851.00 to the vendor, \$279,954.00 in personnel costs and \$11,293.00 in general operating costs. The program received \$871,612.00 in fines collected from citations paid during that time period and an additional \$19,063.00 in fees were received from our partner agency, resulting in funds collected over program costs of \$251,577.00.

The Charles County Sheriff's Office is our Speed Camera Program Partner. Personnel of the Charles County Sheriff's Office conduct their own Pre- Approval and Approval of potential citations and send them to the vendor to be printed. The printed citations are then reviewed by a Howard County Speed Camera Program civilian employee for the Post Print Rejection Process (using the same criteria we use). Citations that are not rejected during this process are returned to the vendor to be enveloped and stamped. They are then returned to Howard County for an envelope review (we check that postage is applied and that addresses are viewable in the address envelope), are bound and held for the courier. The Howard County Program Administrator also acts as the liaison between Charles County and the vendor. The Charles County Sheriff's Office is charged a monthly fee for the services provided by Howard County Department of Police personnel.



**Funds over costs of the program were increased primarily due to a reduction in vendor billing. During FY14, the HCPD program increased from two to four cameras. During FY15, the additional camera systems resulted in a greater number of violations being detected. Because of the increased volume, the processing fee was reduced. Those savings allowed the program to keep more funds to be allocated for traffic safety projects. (Note: Beginning in January 2016, the program switched to a flat-fee monthly payment to the vendor, which will be reflected in the 2016 report.)*

Funds collected over program costs are required by law to be directed to school, traffic and pedestrian safety projects. During FY 2015, \$134,992.00 in the excess revenue fund was allocated by the Traffic Engineering Division of the Howard County Department of Public Works for two Capital Projects, T7088 and T7089. T7088 was for School Crosswalk Improvements to include the installation and/or modification of crosswalks, chokers, raised shoulders, raised crosswalks, signs, signals or other retrofits to enhance walking route safety for school children. T7089 was for Residential Traffic Calming to construct geometric roadway changes to assist in reducing traffic speeds in residential areas.

Section 6 List of School Zones and Any Changes

The Department of Public Works – Traffic Engineering Division reports that there have been no changes to existing School Zones in the county.

This is a list of School Zone Locations where enforcement activities can take place.

SCHOOL ZONE	ROADWAY NAME	SPEED LIMIT	LOCATION CODE
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Highlighted areas are PCU Locations

Atholton Elementary School

1.	NB 6600 blk. Seneca Drive	25 MPH	0001
2.	SB 6600 blk. Seneca Drive	25 MPH	0002
3.	EB 10100 blk. Donleigh Drive	25 MPH	0003
4.	WB 10100 blk. Donleigh Drive	25 MPH	0004

Atholton High School

5.	NB 6500 blk. Freetown Road	25 MPH	0005
6.	SB 6500 blk. Freetown Road	25 MPH	0006

Bellows Springs Elementary School

7.	WB Old Stockbridge Road @ elementary	35 MPH	0007
8.	EB Old Stockbridge Road @ elementary	35 MPH	0008

Bethel Christian Academy – Elementary School

9.	NB 8400 blk. Savage Guilford Road	30 MPH	0009
10.	SB 8400 blk. Savage Guilford Road	30 MPH	0010

Bollman Bridge Elementary, Patuxent Valley Middle, Bethel Christian Academy Middle

11. NB 8200 blk. Savage Guilford Road	30 MPH	0011
12. SB 8200 blk. Savage Guilford Road	30 MPH	0012
13. WB Vollmerhausen Road @ Bethel Christian	30 MPH	0013
14. EB Vollmerhausen Road @ Bethel Christian	30 MPH	0014
15. EB 9100 blk. Vollmerhausen Road	30 MPH	0015
16. WB 9100 blk. Vollmerhausen Road	30 MPH	0016

Bonnie Branch Middle, Ilchester Elementary, OLPH Schools

17. NB 5000 blk. Ilchester Road	30 MPH	0017
18. SB 5000 blk. Ilchester Road	30 MPH	0018
19. NB 4900 blk. Ilchester Road	30 MPH	0019
20. SB 4900 blk. Ilchester Road	30 MPH	0020
21. NB Ilchester Road @ Wharf Lane	30 MPH	0179
22. SB Ilchester Road @ Wharf Lane	30 MPH	0180

Bryant Woods Elementary School

23. NB 10400 blk. Green Mountain Circle	25 MPH	0021
24. SB 10400 blk. Green Mountain Circle	25 MPH	0022

Bushy Park Elementary School

25. EB 14000 blk. Carrs Mill Road	30 MPH	0023
26. WB 14000 blk. Carrs Mill Road	30 MPH	0024

Centennial High and Burleigh Manor Middle Schools

27. NB 4300 blk. Centennial Lane	35 MPH	0025
28. SB Centennial Lane @ Centennial Woods Ln	35 MPH	0026
29. NB Centennial @ Middle School	35 MPH	0027
30. NB Centennial Lane @ Centennial Woods Ln	35 MPH	0162

Centennial Lane Elementary School

31. NB Centennial Lane @ Culverene Road	35 MPH	0028
32. SB Centennial Lane @ Breconshire Road	35 MPH	0029
33. NB Centennial Lane @ Breconshire Road	35 MPH	0170

Chapelgate Christian Academy

34. NB 2700 blk. Marriottsville Road	45 MPH	0030
35. SB 2700 blk. Marriottsville Road	45 MPH	0031
36. NB 2700 blk. Marriottsville Road	45 MPH	0182
37. SB 2700 blk. Marriottsville Road	45 MPH	0183

Clarksville Elementary / Riverhill High School

38. NB 12100 blk. MD Rt. 108	45 MPH	0032
39. SB MD Rt. 108 @ Broad Meadow Lane	45 MPH	0033

Clarksville Middle / Pointers Run Elementary School

40. WB 6700 blk. Guilford Road	40 MPH	0034
41. EB 6500 blk. Guilford Road	40 MPH	0035

Clemmons Crossing Elementary School

42. EB 10300 blk. Quarterstaff Road	30 MPH	0036
43. WB 10300 blk. Quarterstaff Road	30 MPH	0037

Columbia Academy

44. NB 10300 blk. Old Columbia Road	30 MPH	0038
45. SB 10300 blk. Old Columbia Road	30 MPH	0039

Cradlerock Elementary / Lake Elkhorn Middle Schools

46. EB 6600 blk. Cradlerock Way	30 MPH	0040
47. WB 6700 blk. Cradlerock Way	30 MPH	0041
48. NB Cradlerock Way @ Melting Shadows Ln	30 MPH	0042
49. SB Cradlerock Way @ Cradlerock Farm Ct	30 MPH	0043

Dayton Oaks Elementary School

50. NB 4600 blk. Ten Oaks Road	35 MPH	0044
51. SB 4600 blk. Ten Oaks Road	35 MPH	0045

Deep Run Elementary School

52. NB 6700 blk. Old Waterloo Road	30 MPH	0046
53. SB 6700 blk. Old Waterloo Road	30 MPH	0047
54. NB 6600 blk. Old Waterloo Road	30 MPH	0175

Ducketts Lane Elementary School

55. EB 6500 blk. Ducketts Lane	30 MPH	0171
56. WB 6500 blk. Ducketts Lane	30 MPH	0172

Dunloggin Middle / Northfield Elementary Schools

57. EB 9100 blk. Northfield Road	25 MPH	0048
58. WB 9100 blk. Northfield Road	25 MPH	0049
59. NB 4000 blk. Crescent Road	25 MPH	0050
60. SB 4000 blk. Crescent Road	25 MPH	0051

Elkridge Elementary / Elkridge Landing Middle Schools

61. EB 7000 blk. Montgomery Road	35 MPH	0052
62. WB 7100 blk. Montgomery Road	35 MPH	0053

Ellicott Mills Middle / Veteran Elementary Schools

63. EB 4400 blk. Montgomery Road	40 MPH	0054
64. WB 4400 blk. Montgomery Road	40 MPH	0055

Folly Quarter Middle / Triadelphia Ridge Elementary Schools

65. EB 13500 blk. Triadelphia Road	30 MPH	0056
66. WB 13400 blk. Triadelphia Road	30 MPH	0057
67. EB 13300 blk. Triadelphia Road	30 MPH	0058
68. WB Triadelphia Road @ Hunt Ridge	30 MPH	0059

Forest Ridge Elementary School

69. EB 9500 blk. Gorman Road	30 MPH	0060
70. WB 9500 blk. Gorman Road	30 MPH	0061
71. WB Gorman Road @ Eternal Rings Drive	30 MPH	0160
72. EB Gorman Road @ Eternal Rings Drive	30 MPH	0161

Fulton Elementary / Lime Kiln Middle / Reservoir High Schools

73. EB MD Rt. 216 @ School Complex	45 MPH	0062
74. WB MD Rt. 216 @ School Complex	45 MPH	0063

Glenelg Country School

75. EB 12700 blk. Folly Quarter Road	40 MPH	0064
76. WB 12700 blk. Folly Quarter Road	40 MPH	0065

Glenelg High School

77. EB 14100 blk. Burntwoods Road	35 MPH	0066
78. WB 13900 blk. Burntwoods Road	35 MPH	0067
79. NB 3400 blk. Sharp Road	25 MPH	0068
80. SB 3400 blk. Sharp Road	25 MPH	0069

Glenwood Middle School

81. NB 2600 blk. MD Rt. 97	45 MPH	0070
82. SB 2600 blk. MD Rt. 97	45 MPH	0071

Gorman Crossing Elementary / Murray Hill Middle Schools

83. EB Skylark Blvd @ Winter Sun Road	30 MPH	0072
84. WB Skylark Blvd @ Winter Sun Road	30 MPH	0073

Guilford Elementary School

85. NB 7300 blk. Oakland Mills Road	35 MPH	0074
86. SB 7200 blk. Oakland Mills Road	35 MPH	0075

Clarksville Middle / Pointers Run Elementary Schools

87. NB Great Star Dr @ Eastern Star Way	30 MPH	0076
88. SB Great Star Dr @ Western Star Run	30 MPH	0077

Hammond Middle / Hammond Elementary Schools

89. EB 10500 blk. Grae Loch Drive	25 MPH	0078
90. WB 10500 blk. Grae Loch Drive	25 MPH	0079
91. NB 8000 blk. Aladdin Drive	25 MPH	0080

92. SB 8000 blk. Aladdin Drive	25 MPH	0081
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Hammond High School

93. EB 8600 blk. Guilford Road	35 MPH	0082
94. WB 8800 blk. Guilford Road	35 MPH	0083

Harpers Choice Middle School

95. NB Beaverkill Road @ Ruth Keeton Way	25 MPH	0084
96. SB Beaverkill Road @ Ruth Keeton Way	25 MPH	0085

Hollifield Station Elementary School

97. EB Rogers Ave @ Patapsco Valley Dr.	35 MPH	0086
98. WB Rogers Ave @ Patapsco Valley Dr.	35 MPH	0087
99. EB 8600 blk. Stonehouse Drive	25 MPH	0088
100. WB 8700 blk. Stonehouse Drive	25 MPH	0089
101. WB 8600 blk. Stonehouse Drive	25 MPH	0157

Howard High School

102. EB Old Annapolis Road @ School	40 MPH	0090
103. WB Old Annapolis Road @ School	40 MPH	0091

Jeffers Hill Elementary School

104. NB 6000 blk. Tamar Drive	25 MPH	0092
105. SB 5900 blk. Tamar Drive	25 MPH	0093
106. WB 6000 blk. Majors Lane	25 MPH	0094
107. EB 9100 blk. Old Montgomery Road	25 MPH	0164
108. WB 9100 blk. Old Montgomery Road	25 MPH	0165

Laurel Woods Elementary School

109. SB N. Laurel Rd @ Covered Wagon Dr.	25 MPH	0095
110. NB N. Laurel Rd @ Old Lantern Way	25 MPH	0096

Lisbon Elementary School

111. EB 15900 blk. Frederick Road	35 MPH	0097
112. WB 15800 blk. Frederick Road	35 MPH	0098

Long Reach High School

113.	NB 6100 blk. Old Dobbin Road	30 MPH	0099
114.	SB 6100 blk. Old Dobbin Road	30 MPH	0100
115.	EB Tamar Dr. @ Old Dobbin Road	30 MPH	0101
116.	WB Tamar Dr. @ Autumn Ridge	30 MPH	0102
117.	EB Tamar Drive @ Autumn Ridge	30 MPH	0181

Longfellow Elementary School

118.	EB 5400 blk. Hesperus Dr.	25 MPH	0103
119.	WB 5400 blk. Hesperus Dr.	25 MPH	0104

Manor Woods Elementary School

120.	EB 11600 blk. Frederick Road	40 MPH	0105
121.	WB 11500 blk. Frederick Road	40 MPH	0106

Marriotts Ridge High / Mount View Middle Schools

122.	SB 12100 blk. Woodford Dr	30 MPH	0107
123.	EB 12100 blk. Old Frederick Road	50 MPH	0108
124.	WB 12000 blk. Old Frederick Road	50 MPH	0109

Mayfield Woods Middle School

125.	EB 7900 blk. Mayfield Ave	30 MPH	0110
126.	WB 7800 blk. Mayfield Ave	30 MPH	0111

Mt. Airy Bible Academy

127.	EB 16800 blk. Old Frederick Road	50 MPH	0112
128.	WB 16800 blk. Old Frederick Road	50 MPH	0113

Mt. Hebron High School

129.	EB 9500 blk. Old Frederick Road	40 MPH	0114
130.	WB 9400 blk. Old Frederick Road	40 MPH	0115
131.	NB St. Johns Ln at Old St. Johns Ln	30 MPH	0168
132.	SB St. Johns Ln at Old St. Johns Ln	30 MPH	0169

Oakland Mills Middle / High Schools

133.	EB 9500 blk. Kilimanjaro Road	25 MPH	0116
134.	WB 9400 blk. Kilimanjaro Road	25 MPH	0117
135.	WB 5600 blk. Thunderhill Road	25 MPH	0118
136.	EB 9600 blk. Santiago Road	25 MPH	0119
137.	EB Kilimanjaro RD at Pamplona RD	25 MPH	0176
138.	WB Kilimanjaro RD at Good Lion	25 MPH	0177
139.	EB Kilimanjaro RD at Macomber LN	25 MPH	0178
140.	WB Kilimanjaro RD at Oakland Mills HS	25 MPH	0179

Patapsco Middle School

141.	EB 8800 blk. Old Frederick Road	25 MPH	0120
142.	WB 8800 blk. Old Frederick Road	25 MPH	0121

Phelps Luck Elementary School

143.	EB 5300 blk. High Tor Hill	25 MPH	0122
144.	WB 5300 blk. High Tor Hill	25 MPH	0123

Phillips School

145.	WB 8900 blk. Whiskey Bottom Road	35 MPH	0124
146.	EB 9000 blk. Whiskey Bottom Road	35 MPH	0125
147.	WB 8900 blk. Whiskey Bottom Road	35 MPH	0187

Rockburn Elementary School

148.	EB 6000 blk. Montgomery Road	35 MPH	0126
149.	WB 6100 blk. Montgomery Road	35 MPH	0127

Running Brook Elementary School

150.	NB 5200 blk. West Running Brook Rd	25 MPH	0128
151.	SB 5200 blk. West Running Brook Rd	25 MPH	0129

St. Augustine School

152.	NB 6000 blk. Old Washington Rd	30 MPH	0130
153.	SB 5900 blk. Old Washington Rd	30 MPH	0131

St. Johns Lane Elementary School

154.	NB 3000 blk. St. Johns Lane	30 MPH	0132
155.	SB 2900 blk. St. Johns Lane	30 MPH	0133

St. Johns Parish Day School

156.	EB 9200 blk. Frederick Road	35 MPH	0134
157.	WB 9100 blk. Frederick Road	35 MPH	0135

St. Louis School

158.	WB 6300 blk. Ten Oaks Road	40 MPH	0136
159.	NB 12500 blk. Clarksville Pike	35 MPH	0137
160.	SB 12400 blk. Clarksville Pike	35 MPH	0138
161.	EB 6300 blk. Ten Oaks Road	40 MPH	0163

St. Paul's Resurrection School

162.	NB 3300 blk. North Chatham Road	25 MPH	0139
163.	SB 3100 blk. North Chatham Road	25 MPH	0140

Stevens Forest Elementary School

164.	NB 6100 blk. Stevens Forest Road	30 MPH	0141
165.	SB 6000 blk. Stevens Forest Road	30 MPH	0142

Swansfield Elementary School

166.	NB 5700 blk. Cedar Lane	30 MPH	0143
167.	SB 5500 blk. Cedar Lane	30 MPH	0144

Talbott Springs Elementary School

168.	EB 9600 blk. Whiteacre Road	25 MPH	0145
169.	WB 9500 blk. Whiteacre Road	25 MPH	0146

Thomas Viaduct Middle School

170.	NB 7000 blk. Banbury Drive	25 MPH	0173
171.	SB 7000 blk. Banbury Drive	25 MPH	0174

Thunderhill Elementary School

172.	NB 9300 blk. Mellonbrook Road	25 MPH	0147
173.	SB 9300 blk. Mellonbrook Road	25 MPH	0148

Waterloo Elementary School / MD School for Deaf

174.	SB 8100 blk. Old Montgomery Road	35 MPH	0149
175.	NB 8100 blk. Old Montgomery Road	35 MPH	0150
176.	NB 8200 blk. Old Montgomery Road	30 MPH	0166
177.	SB 8200 blk. Old Montgomery Road	30 MPH	0167
178.	SB 8200 blk. Old Montgomery Road	30 MPH	0184
179.	NB 8100 blk. Old Montgomery Road	35 MPH	0186

Waverly Elementary School

180.	EB 10200 blk. Wetherburn Road	25 MPH	0151
181.	WB Old Frederick Road @ Maplewood	40 MPH	0158
182.	EB Old Frederick Road @ Wetherburn	40 MPH	0159

West Friendship Elementary School

183.	EB 12500 blk. Frederick Road	40 MPH	0152
184.	WB 12400 blk. Frederick Road	40 MPH	0153

Worthington Elementary School

185.	NB 4600 blk. Doncaster Drive	25 MPH	0154
186.	SB 4500 blk. Doncaster Drive	25 MPH	0155
187.	WB 4600blk. Roundhill Road	25 MPH	0156

Section 7. Major Problems or Irregularities

The program did not encounter any major problems in 2015.

Minimal public opposition: For the most part during 2015, driver opposition to the program has diminished to some drivers yelling obscenities at the van operator. We had one serious incident in 2015; a 66% decrease from 2014. In May a passing vehicle operator or passenger shot out the rear window of the speed camera van with a BB gun while the van was parked on Ilchester Road. The van operator was not injured but was unable to identify a suspect vehicle; the case remains unsolved.

To address the issue of objects being thrown or shot at our speed camera vans and operators we have enhanced the strength of the rear van windows. Our vendor is also installing an outside video monitoring and recording system on each of the vans. This system will help identify those people that throw or shoot objects at the vans and van operators.

Section 8. Program Recommendations

The Howard County Speed Camera program continues to show success by reducing speeds and collisions in school zones.

Our program was designed as an additional tool to supplement the efforts of patrol officers in furtherance of one of our department goals: ***Save Lives, Prevent Collisions and Facilitate the Efficient Movement of Vehicular and Pedestrian Traffic***. The days and hours of documented enforcement show that this program is a dedicated resource which truly enhances our ability to improve safety in school zones.

The County Code authorizes the use of eight speed camera systems. During 2013, we expanded our program from two mobile detection units, to four with the addition of two PCUs. The Howard County Department of Police continues to recommend the use of these four systems. We have added additional locations where the PCU is used and this change in enforcement posture has increased the number of violations detected. The Department is continuing to review our enforcement locations to identify any additional school zones that may benefit from the use of a portable camera unit. Adding an additional PCU detection system is being considered to effectively meet the enforcement demands of the added PCU locations.

The Howard County Department of Police continues to believe that the Howard County Speed Camera Program serves as a model for other jurisdictions.